IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Lakhdhir et al.**	§	
	§	Group Art Unit: **2178**
Serial No. **10/046,999**	§	
	§	Examiner: **Honeycutt, Kristina B.**
Filed: **January 16, 2002**	§	
	§	
For: **Offline Dynamic Web Page Generation**	§	

Commissioner for Patents
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35525
PATENT TRADEMARK OFFICE
CUSTOMER NUMBER

REPLY BRIEF (37 C.F.R. 41.41)

This Reply Brief is submitted in response to the Examiner's Answer mailed on December 15, 2006.

No fees are believed to be required to file a Reply Brief. If any fees are required, I authorize the Commissioner to charge these fees which may be required to IBM Corporation Deposit Account No. 09-0447.

REPLY TO EXAMINER'S ANSWER

I. ARGUMENT

In response to the appeal brief, the examiner responded to two of appellant's arguments. First, the examiner attempted to counter the fact that *Agrawal et al*, Methods and Systems for Partial Page Caching of Dynamically Generated Content, U.S. Patent Application Publication 2002/0004813 (January 10, 2002) (hereinafter "*Agrawal*") fails to teach the claimed feature of, "at regular intervals or when dynamic content changes, performing the following steps," as in claim 1. Second, the examiner attempted to counter the fact that no teaching, suggestion, or motivation exists to combine *Agrawal* with *Donohue et al*, Method and System for Delivering Documents Customized for a Particular User Over the Internet Using Imbedded Dynamic Content, U.S. Patent 5,987,480 (November 16, 1999) (hereinafter "*Donohue*"). Appellants address each of these arguments in turn and prove that the examiner is incorrect in both cases.

I.A. The Combination of the References, Considered as a Whole, Does Not Teach All of the Features of Claim 1

Regarding the fact that the proposed combination, considered as a whole, does not teach or suggest the claimed feature of, "at regular intervals or when dynamic content changes, performing the following steps," the examiner states that:

> Regarding independent claim 1, the appellants note that Claim 1 is not obvious over the combination of Donohue and Agrawal for at least the following two reasons: (a) neither Agrawal nor Donohue disclose the feature of "performing the ... steps" to produce dynamic web pages "at regular intervals or when dynamic content changes" and (b) one of ordinary skill in the art would not use the suggested motivation to combine these two references (p. 10, lines 6-1 0; p.1 I, lines 31 -32). The Examiner disagrees with part (a) because Agrawal teaches performing steps to maintain a webpage when the dynamic content has changed (p.1, para. 10) since Agrawal teaches regenerating and caching a dynamic webpage when the cached version is invalid (stale), meaning the content of the webpage has changed since the last caching. The current version of the webpage is cached so that a server does not have to render the dynamic content each time the page is accessed.

Examiner's Answer of December 15, 2006, p. 12.

However, the examiner's assertion that *Agrawal* teaches this claimed feature is clearly erroneous. The portion of *Agrawal* cited by the examiner is as follows:

> [0010] Caching has emerged as the most important solution for reducing the cost of dynamically generating Web pages. The premise underlying caching is that in many cases, the content of dynamically generated pages does not change very frequently, thereby allowing the accessed pages to be cached. The server caches (locally stores for later retrieval) copies of such dynamically generated Web pages. Conventionally, as shown in FIG. 1 at S11, a client sends a Hypertext Transfer Protocol (HTTP) request for a Web page by, for example, clicking on a hyperlink or by specifying a Universal Resource Locator (URL). As shown at S12, the HTTP request is then received by the server, which then checks its cache to see if the response to the request (the entire requested Web page) is stored in the cache, as shown at S13. As called for by S18, if the requested page is indeed present in the cache and if the response page is still valid, the page is extracted from the cache and sent to the client, as shown at S17. ***If the entire requested page is not present in the cache or is present but invalid (stale)**, application logic and/or the Web page's script is executed, as shown at S14. Executing the application logic and/or script may require the server to access data sources such as databases or information feeds, as called for by step S15. **Only thereafter may the requested Web page be dynamically generated and sent to the client, as specified in steps S16 and S17**.* A step of caching the just-generated full page in memory may also be carried out. This mechanism works very well as long as the dynamically generated pages can be cached efficiently (i.e., they are not invalidated very frequently), and the cost of servicing the page from the cache is less than the cost of re-generating the page again. As a result of efficient caching, a Web server uses fewer resources, especially Central Processing Unit resources to service a client's HTTP request. The ability to cache and to efficiently retrieve cached pages improves the server's performance (reduced response time) as well as its capacity to acceptably accommodate a greater number of users than it would otherwise have been able to serve without resorting to caching.

Agrawal, paragraph 10 (emphasis to show portions most relevant to the rejection).

Agrawal teaches that *if* the *requested* page is not present or is invalid, then the Web page's script is executed. *Only thereafter* is the Web page dynamically generated and sent to the client. Compare this teaching to the precise language of claim 1: "at regular intervals or *when dynamic content changes*, performing the following steps."

Agrawal does not teach generating the dynamic page at regular intervals, and the examiner does not assert otherwise. *Agrawal* also does not teach generating the dynamic page

when dynamic content changes. Instead, *Agrawal* teaches generating a dynamic page *if a request is made and if the page is stale*. Thus, *Agrawal* does not actually generate a dynamic page *when* dynamic content changes, as required in claim 1. Instead, *Agrawal* teaches that a dynamic page *is not* generated *when* the content changes. Thus, *Agrawal* does not teach the claim feature at issue.

Furthermore, *Agrawal* does not suggest generating a dynamic page *when* the dynamic content changes, as in claim 1. The entire point of *Agrawal*'s disclosure is to *avoid* generating dynamic Web pages unnecessarily in order to reduce the associated overhead cost. Thus, *Agrawal* teaches caching previously dynamic Web pages in order to *avoid* generating a dynamic Web page *when* dynamic content changes. For this reason, *Agrawal* actually *teaches against* the invention of claim 1.

Additionally, *Donohue* does not teach or suggest the claimed feature of "at regular intervals or when dynamic content changes, performing the following steps," and the examiner does not assert otherwise. As shown above, *Agrawal*'s does not teach this claimed feature, but rather teaches against this claimed feature. Therefore, the proposed combination of *Donohue* and *Agrawal*, considered as a whole, does not teach or suggest this claimed feature. Accordingly, the examiner has failed to state a *prima facie* obviousness rejection against claim 1 and against the remaining claims in this grouping of claims.

I.B. No Teaching, Suggestion, or Motivation Exists to Combine the References to Achieve the Invention of Claim 1

Regarding the fact that no teaching, suggestion, or motivation exists to combine the references to achieve the invention of claim 1, the examiner states that:

> Regarding independent claim 1, the appellants note that Claim 1 is not obvious over the combination of Donohue and Agrawal for at least the following two reasons: (a) neither Agrawal nor Donohue disclose the feature of "performing the ... steps" to produce dynamic web pages "at regular intervals or when dynamic content changes" and (b) one of ordinary skill in the art would not use the suggested motivation to combine these two references (p. 10, lines 6-10; p.11, lines 31 -32).
>
> ...
>
> The Examiner further disagrees with part (b) because Donohue teaches maintaining webpages with dynamic content by locating command strings

(dynamic tags, IF and LOOP instructions) in a source document (template), retrieving names corresponding to the elements in the command strings and replacing the string with the retrieved names to create an updated version of a dynamic webpage (col. 10, lines 38-67; col. 11-1 8) and Agrawal teaches updating caches versions of dynamic webpages (p.1, para. 10). Both Donohue and Agrawal teach methods of updating and delivering dynamic webpages. It would have been obvious to one of ordinary skill in the art, having the teachings of Donohue and Agrawal before him at the time the invention was made, to modify updating a dynamic webpage as taught by Donohue to include caching updated versions of a dynamic webpage as taught by Agrawal since the server would use fewer resources, reduce response time and be able to accommodate a greater number of users, as taught by Agrawal (p.1, para. 10), by caching updated versions of the webpage for future access so that the dynamic content would not have to be rendered each time the page is accessed.

Examiner's Answer of December 15, 2006, pp. 12-13.

The examiner does not address the fact that one of ordinary skill would not combine *Donohue* and *Agrawal* because *Donohue* is directed towards *customizing* documents and *Agrawal* is directed towards *avoiding* unnecessary updating of Web pages. Appeal Brief, p. 12. Instead, the examiner makes a broad, sweeping assertion that *Donohue* and *Agrawal* generally teach methods of updating and delivering dynamic Web pages. The examiner then essentially reasserts the examiner's invalid reason to combine the references.

However, the examiner wholly fails to address the fact that *Donohue* and *Agrawal*, even if in the same field of invention, use directly incompatible techniques to update Web pages. In this manner the examiner is improperly attempting to lump incompatible references together in a manner that one of ordinary skill in the art would find unnatural. Instead, one of ordinary skill would understand that providing highly customized Web pages, as in *Donohue*, and avoiding updating of Web pages, as in *Agrawal*, are mutually exclusive purposes. Thus, one of ordinary skill would avoid combining the references to achieve the invention of claim 1. For this reason, contrary to the examiner's assertions, no teaching, suggestion, or motivation exists to combine the references to achieve the invention of claim 1.

I.C. *Agrawal* Teaches Against the Invention of Claim 1

Additionally, as shown above, *Agrawal* specifically teaches against the feature of claim 1 because *Agrawal* teaches avoiding the generation of a Web page *when* dynamic content changes,

whereas claim 1 requires this feature. Thus, again, no teaching, suggestion, or motivation exists to combine the references to achieve the invention of claim 1. Accordingly, the examiner has failed to state a *prima facie* obviousness rejection against claim 1 and against all other claims in this grouping of claims.

I.D. The Examiner's Proposed Reason to Combine the References Is Invalid to Serve as a Proper Teaching, Suggestion, or Motivation to Combine the References to Achieve the Invention of Claim 1

Additionally, the examiner's proposed reason to combine the references is invalid to serve as a proper teaching, suggestion, or motivation to combine the references to achieve the invention of claim 1. Regarding a reason to combine the references, the examiner states that combining the references would be obvious because:

> ... the server would use fewer resources, reduce response time and be able to accommodate a greater number of users, as taught by Agrawal (p.1, para. 10), by caching updated versions of the webpage for future access so that the dynamic content would not have to be rendered each time the page is accessed.

Examiner's Answer of December 15, 2006, p. 13.

However, as shown above, *Agrawal* teaches against the invention of claim 1. Furthermore, the examiner only discusses *Agrawal* in asserting a proposed reason to combine *Agrawal* with *Donohue*. The examiner only asserts, without support or argument, that the server in *Donohue* would benefit from the teachings of *Agrawal*. However, to one of ordinary skill in the art, because *Donohue* and *Agrawal* seek mutually exclusive goals, the server in *Donohue* would not benefit from the teachings of *Agrawal*. The examiner provides no reasoning to prove otherwise. Thus, the examiner's proposed motivation to combine the references is invalid and improper *vis-à-vis* a teaching, suggestion, or motivation to achieve the invention of claim 1. Because the examiner has not stated a proper teaching, suggestion, or motivation to combine the references, the examiner failed to state a *prima facie* obviousness rejection against claim 1 and against the remaining claims in this grouping of claims.

II. CONCLUSION

The rejections are clearly in error for the reasons stated above. Therefore, appellants request that the Board of Patent Appeals and Interferences overturn the rejections. Appellants further request that the Board direct the examiner to allow the claims.

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